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EXAMINER

THANGAVELU, KANDASAMY

ART UNIT

PAPER NUMBER

2123

DATE MAILED: 12/19/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/270,128

Applicant(s)

MILLER, THOMAS R.

Examiner

Kandasamy Thangavelu

Art Unit

2123

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 August 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 March 1999 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Introduction

1. Claims 1 to 19 of the Application 09/270128 filed on 16 March 1999 are pending.

Foreign Priority

2. Acknowledgment is made of applicant's claim for foreign priority based on an application 9817501.1 filed in UK on August 12, 1998 and application 9807102.0 filed in UK on April 3, 1998. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

3. Acknowledgment is made of the first information disclosure statement filed on March 16, 1999 and the second information disclosure statement filed on August 26, 1999 together with the copies of patents and papers. The patents and papers have been considered in reviewing the claims.

Drawings

4. Figures 1, 4a, 4b, 6, 8, 9, 10, 12-15, 17-21, 23-25, and 29-31 are objected to because the margins at the bottom are too small. See 37 CFR 1.84(g).

There are two figures identified as Fig 22b1. The second figure should be Fig 22b2. It is a continuation of the first Fig 22b1.

Abstract.

5. The abstract is objected to because it exceeds 150 words. See MPEP § 608.01(b).

37 CFR 1.72. Title and abstract.

(b) A brief abstract of the technical disclosure in the specification must commence on a separate sheet, preferably following the claims under the heading "Abstract of the Disclosure." The abstract in an application filed under 35 U.S.C. 111 may not exceed 150 words in length. The purpose of the abstract is to enable the Patent and Trademark Office and the public generally to determine quickly from a cursory inspection the nature and gist of the technical disclosure. The abstract shall not be used for interpreting the scope of the claims.

Specification

6. The disclosure is objected to because of the following informalities:

Page 17 Lines 12, delete "in figure 9"; it is repeated in Line 9.

Page 17 Line 18, "in figure 10" is repeated. Delete the second occurrence of "in figure 10".

Page 19, Line 26, "simulation software 46b be executed by" is grammatically incorrect.

Page 21, Lines 10-11, refer to results viewer 44e1 and report generator 44e2. However in Figures 13, 16 and 17, these are identified by identifiers 1A and 1B. Use the same identifiers in the Figures and in the specification.

Page 21, Lines 22 to Page 22, Line 8: In the tree structure, the sub parts are referred to as supersets. This is inconsistent with the generally understood use of tree structure.

Should they be subsets?

Page 24, Lines 17, 19 and 25 refer to "subset of the simulation file" and Lines 26, 28 and 30 refer to "subset of results". The use of supersets of data to develop subsets of simulation file is inconsistent.

Page 27, Line 27 refers "new-2 60 superset test data file" while line 29 refers to "new-2 60 subset test data file". The applicant is required to use consistent terminology for identifying sets of input data files.

Page 28, Lines 13 and 14 refer to the raw data input to the case builder and the edited raw data by identifier 50. Since the data will be different after editing, should it be identified by a different identifier?

Page 35, Line 12, refers to "aquifers, layers, ... grid builder and general". The use of "general" here is not understood.

Page 56, Line 5, Initialization is shown as Initialisation in Fig. 22b, block 150.

Page 59, Lines 14 and 20: The View and Region menu bar items are not shown in Fig. 25.

Page 60, Lines 16 and 22: The View and Region menu bar items are not shown in Fig. 26.

Appropriate corrections are required.

Claim Objections

7. The following is a quotation of 37 C.F.R § 1.75 (d)(1):

The claim or claims must conform to the invention as set forth in the remainder of the specification and terms and phrases in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description.

8. Claim 15 is objected to because of the following informalities:

Page 72 Lines 24-25, "run manager ... edited case scenarios from the case builder means for submitting the edited case scenario to a simulator" is not clear.

Claim 16 is objected to because of the following informalities:

Page 73, Line 22 "said plurality of superset of data" should be "said plurality of supersets of data".

Appropriate corrections are required.

Prior Art

9. **Huang et al. (HU)** (US Patent 6,151,582) teaches a scenario manager for the decision support system simulator. **HU** teaches the following:

1. Users generate **changes to the databases** that can be saved as **scenarios** which can be managed by a **scenario manager** (Col 94, Lines 42-45).
2. Scenarios contain **edited data, results of the analysis**, graphs, charts and performance metrics (Col 94, Lines 45-46).
3. The **output** of an analysis in one frame is saved as a **scenario** and used as **input** in another frame (Col 94, Lines 64-66).
4. The user should be allowed to load **portion of a scenario** into a frame (Col 95, Lines 3-4).
5. Data integration has been obtained by having a **common database** from which **input data to the decision models** are retrieved and **outputs** updated (Col 95, Lines 43-46).
6. **Performance simulator** to **monitor** the effects due to system dynamics (Col 95, Lines 63-64).
7. **User interface** of the **performance simulator** has three major features: network configuration, **parameter settings** and **simulation and monitoring** (Col 96, Lines 35-37).
8. Parameter settings will be displayed in **editable** screens (Col 96, Lines 44-45).
9. The **performance monitoring** screen displays global performance metrics (Col 96, Lines 57-58).
10. Service level and cost profiles for each aggregate measure will be **displayed** as time series graphs (Col 97, Lines 19-21).
11. **Tree like data structure** is presented (Figure 59).

10. **Cowgill (CW)** (US Patent 5,835,566) teaches a simulator for testing telecommunication network components. **CW** teaches the following:

1. The test creation environment supports a functional, test independent approach to **call processing simulation** (Col 6, Lines 42-45).
2. The test creation environment is supported by a plurality of modules including a test logic program **editor**, a **test case builder**, a test suite builder and a test scheduler (Col 12, Lines 34-37).
3. The user can **create test cases** and schedule the cases for execution (Col 12, Lines 39-40).
4. The test execution environment (TEE) includes a **test execution controller** and a **test reporter** (Col 12, Lines 52-53).
5. The objective of TEE is to **control and monitor** test suite execution, to **log results** of the execution, to analyze the execution results in **comparison to expected results** and to **generate reports** (Col 12, Lines 54-58).
6. The **test execution controller** executes the test cases contained in the test suites (Col 12, Lines 62-63).
7. The user employs an **editor** to create the test logic (Col 13, Lines 16-17).
8. The TLP **editor** provides **parameter** creation and **modification** (Col 13, Lines 56-57).
9. The test builder **menu** includes administrative data area for describing **information about the test case** (Col 14, Lines 40-42).

11. **Gunsekera (GU)** (US Patent 6,078,869) teaches a Petragrid simulation which can display 3D pictures of grid cells. **GU** teaches the following:

1. Flow simulations on grids based on triangles have been used by various authors inside and outside the petroleum industry. This technique was applied to **reservoir simulation** by Forsyth.
2. In response to the input data, the **simulator** will generate **simulation results** (Col 17, Lines 29-30).
3. The assigned color associated with the particular **simulation results** will be used to **display** the actual value of the simulation results on the **3D viewer**. (Col 17, Lines 56-59).

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

13. Claim 1 is rejected under 35 U.S.C. 102(e) as being clearly anticipated by **Huang et al.** (**HU**) (US Patent 6,151,582).

Claim 1 specifies:

1. An organizing and managing system in a simulation system including a source of input data, a display and a simulator.
2. The simulation system generates a set of simulation results during the execution in response to the input data.
3. The organizing and managing system is interconnected between the source of input data, the simulator and the display.
4. The organizing and managing system has a case manager for storing a plurality of sets and supersets of test data files.
5. The sets and supersets of test data files are stored in the case manager in the form of a tree like structure.
6. One or more of the sets and the supersets of the test data files are adapted to be selected by the operator.
7. The editing means responsive to the one or more of the sets and the supersets of the test data files selected by the operator via the case manager and responsive to the input data.
8. The editing means for editing the test data files and the input data in response to editing actions taken by the operator and generating a set of edited test data files.
9. The simulator generates the set of simulation results during the execution of the simulator in response to the set of edited test data files.

As per Claim 1, **HU** recites an organizing and managing system in a simulation system including a source of input data, a display and a simulator. **HU** says, "Users generate **changes to the databases** that can be saved as **scenarios** which can be managed by a **scenario manager**" (Col 94, Lines 42-45). **HU** also says, "User **interface** of the **performance simulator** has three major features: network configuration, **parameter settings** and **simulation and monitoring**"

(Col 96, Lines 35-37). **HU** says, “The **performance monitoring** screen displays global performance metrics” (Col 96, Lines 57-58).

HU also teaches that the simulation system generates a set of simulation results during the execution in response to the input data. **HU** says, “The **performance monitoring** screen displays global performance metrics” (Col 96, Lines 57-58).

HU also teaches that the organizing and managing system is interconnected between the source of input data, the simulator and the display. **HU** says, “Scenarios contain **edited data, results of the analysis**, graphs, charts and performance metrics” (Col 94, Lines 45-46).

HU also teaches that the organizing and managing system has a case manager for storing a plurality of sets and supersets of test data files. **HU** says, “Users generate **changes to the databases** that can be saved as **scenarios** which can be managed by a **scenario manager**” (Col 94, Lines 42-45).

HU also teaches that the sets and supersets of test data files are stored in the case manager in the form of a tree like structure. **HU** shows **Tree like data structure** (Figure 59).

HU also teaches that one or more of the sets and the supersets of the test data files are adapted to be selected by the operator. **HU** says, “The user should be allowed to load **portion of a scenario** into a frame” (Col 95, Lines 3-4).

HU also teaches the editing means responsive to the one or more of the sets and the supersets of the test data files selected by the operator via the case manager and responsive to the input data. **HU** says, “Parameter settings will be displayed in **editable** screens” (Col 96, Lines 44-45).

HU also teaches the editing means for editing the test data files and the input data in response to editing actions taken by the operator and generating a set of edited test data files. HU says, "Scenarios contain **edited data, results of the analysis**, graphs, charts and performance metrics" (Col 94, Lines 45-46).

HU also teaches the simulator generates the set of simulation results during the execution of the simulator in response to the set of edited test data files. HU says, "Scenarios contain **edited data, results of the analysis**, graphs, charts and performance metrics" (Col 94, Lines 45-46).

14. Claim 10 is rejected under 35 U.S.C. 102(e) as being clearly anticipated by **Huang et al. (HU)** (US Patent 6,151,582).

Claim 10 specifies:

1. A method for generating a set of simulation results in response to a set of input data and displaying the set of simulation results.
2. The method includes storing the input data in a case manager storage medium in the form of a tree like structure.
3. The input data includes a plurality of sets of data and a plurality of supersets of the data. The sets of the data and the supersets of the data are stored in the case manager storage medium in the form of the tree like structure.
4. The sets of the data and the supersets of the data adapted to be selected by the operator.
5. The sets of the data are generated from the case manager storage medium when the sets of data are selected by the operator.
6. The sets of data are submitted to a simulator in response to the generating step.
7. The simulator generates the set of simulation results during the execution of the simulator in response to the set of edited test data files.
8. The set of simulation results are displayed.

As per Claim 1, HU recites a method for generating a set of simulation results in response to a set of input data and displaying the set of simulation results. HU says, "The **performance monitoring** screen displays global performance metrics" (Col 96, Lines 57-58).

HU also teaches that the method includes storing the input data in a case manager storage medium in the form of a tree like structure. HU says, "Users generate **changes to the databases** that can be saved as **scenarios** which can be managed by a **scenario manager**" (Col 94, Lines 42-45). HU shows **Tree like data structure** (Figure 59).

HU also teaches the input data includes a plurality of sets of data and a plurality of supersets of the data. The sets of the data and the supersets of the data are stored in the case manager storage medium in the form of the tree like structure. HU says, "Scenarios contain **edited data, results of the analysis**, graphs, charts and performance metrics" (Col 94, Lines 45-46). HU shows **Tree like data structure** (Figure 59).

HU also teaches that the sets of the data and the supersets of the data adapted to be selected by the operator. HU says, "The user should be allowed to load **portion of a scenario** into a frame" (Col 95, Lines 3-4).

HU also teaches that the sets of the data are generated from the case manager storage medium when the sets of data are selected by the operator. HU says, "Users generate **changes to the databases** that can be saved as **scenarios** which can be managed by a **scenario manager**" (Col 94, Lines 42-45).

HU also teaches that the sets of data are submitted to a simulator in response to the generating step. HU also says, "**User interface** of the **performance simulator** has three major features: network configuration, **parameter settings** and **simulation and monitoring**" (Col 96, Lines 35-37).

HU also teaches that the simulator generates the set of simulation results during the execution of the simulator in response to the set of edited test data files. HU says, "Scenarios

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contain **edited data, results of the analysis**, graphs, charts and performance metrics” (Col 94, Lines 45-46).

HU also teaches that the set of simulation results are displayed. **HU** says, “Service level and cost profiles for each aggregate measure will be **displayed** as time series graphs (Col 97, Lines 19-21).

15. Claim 16 is rejected under 35 U.S.C. 102(e) as being clearly anticipated by **Huang et al. (HU)** (US Patent 6,151,582).

Claim 16 specifies:

1. A device comprising means for storing instructions executable by a computer.
2. The instructions are adapted for use by a simulation system for generating a set of simulation results in response to a selected set of data and for displaying the set of simulation results.
3. The instructions when executed present for display a tree like structure representing a plurality of sets of data and a plurality of supersets of the data.
4. The plurality of sets of data and the plurality of supersets of data are adapted to be selected by an operator via the tree like structure on the display.
5. The process comprises the step of presenting for display an editing means when the plurality of sets of data or the plurality of superset of data are selected by the operator via the tree like structure on the display.
7. The data are adapted to be edited by the operator via editing means on the display thereby generating edited data.
8. The process comprises the step of submitting the edited data to a simulator when the data is edited by the operator via the editing means on the display.

As per Claim 16, **HU** recites a device comprising means for storing instructions executable by a computer. **HU** says, “**Performance simulator to monitor** the effects due to system dynamics” (Col 95, Lines 63-64). It is understood that the simulation is done on a computer which has means for storing instructions executable by a computer.

HU also teaches that the instructions are adapted for use by a simulation system for generating a set of simulation results in response to a selected set of data and for displaying the set of simulation results. HU also says, “**User interface of the performance simulator** has three major features: network configuration, **parameter settings** and **simulation and monitoring**” (Col 96, Lines 35-37). HU says, “The **performance monitoring** screen displays global performance metrics” (Col 96, Lines 57-58).

HU also teaches that the instructions when executed present for display a tree like structure representing a plurality of sets of data and a plurality of supersets of the data. HU shows **Tree like data structure** (Figure 59).

HU also teaches that the plurality of sets of data and the plurality of supersets of data are adapted to be selected by an operator via the tree like structure on the display. HU says, “Scenarios contain **edited data, results of the analysis**, graphs, charts and performance metrics” (Col 94, Lines 45-46). HU says, “The user should be allowed to load **portion of a scenario** into a frame” (Col 95, Lines 3-4). HU shows **Tree like data structure** (Figure 59).

HU also teaches that the process comprises the step of presenting for display an editing means when the plurality of sets of data or the plurality of superset of data are selected by the operator via the tree like structure on the display. HU says, “Scenarios contain **edited data, results of the analysis**, graphs, charts and performance metrics” (Col 94, Lines 45-46). HU shows **Tree like data structure** (Figure 59).

HU also teaches that the data are adapted to be edited by the operator via editing means on the display thereby generating edited data. HU says, “Scenarios contain **edited data, results of the analysis**, graphs, charts and performance metrics” (Col 94, Lines 45-46).

HU also teaches that the process comprises the step of submitting the edited data to a simulator when the data is edited by the operator via the editing means on the display. HU also says, “**User interface of the performance simulator** has three major features: network configuration, **parameter settings** and **simulation and monitoring**” (Col 96, Lines 35-37). HU says, “Scenarios contain **edited data, results of the analysis**, graphs, charts and performance metrics” (Col 94, Lines 45-46).

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

17. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Huang et al. (HU)** in view of **Cowgill (CW)**.

Claim 2 includes the organizing and managing system of Claim 1, and further specifies:

1. The editing means has a case builder for receiving a first set of keywords associated with the input data.
2. The editing means has a case builder for receiving a second set of keywords associated with the one or more of the sets and the supersets of the test data files selected by the operator via the case manager.
3. The case builder receives the first set of keywords and the second set of keywords for editing in response to editing actions taken by the operator thereby generating a third set of keywords.
4. The editing means has a simulation file adapted for storing the third set of keywords.

As per Claim 2, HU teaches the invention of Claim 1, as discussed above.

HU also teaches that the editing means has a simulation file adapted for storing the third set of keywords. **HU** says, “Scenarios contain **edited data, results of the analysis**, graphs, charts and performance metrics” (Col 94, Lines 45-46).

HU does not teach that the editing means has a case builder for receiving a first set of keywords associated with the input data. **Cowgill (CW)** teaches the editing means has a case builder for receiving a first set of keywords associated with the input data. **CW** says, “The test creation environment is supported by a plurality of modules including a test logic program **editor, a test case builder**, a test suite builder and a test scheduler” (Col 12, Lines 34-37). **CW** also says, “The test builder **menu** includes administrative data area for describing **information about the test case**” (Col 14, Lines 40-42). It is understood that the information about the test case is same as the keywords associated with the input data.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the organizing and managing system (scenario manager) of **Huang et al.** with the test case builder of **Cowgill** for receiving the first set of keywords associated with the input data. The artisan would be motivated to provide the case builder for receiving the first set of keywords associated with the input data as it would enhance the ease of selection of various test cases.

HU does not teach that the editing means has a case builder for receiving a second set of keywords associated with one or more of the sets and the supersets of the test data files selected by the operator via the case manager. **Cowgill (CW)** teaches the editing means has a case builder for receiving a second set of keywords associated with one or more of the sets and the supersets of the test data files selected by the operator via the case manager. **CW** says, “The test creation environment is supported by a plurality of modules including a test logic program

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editor, a **test case builder**, a test suite builder and a test scheduler” (Col 12, Lines 34-37). **CW** also says, “The test builder **menu** includes administrative data area for describing **information about the test case**” (Col 14, Lines 40-42). It is understood that the information about the test case includes the keywords associated with one or more of the sets and the supersets of the test data files

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the organizing and managing system (scenario manager) of **Huang et al.** with the editing means having a case builder of **Cowgill** for receiving a second set of keywords associated with the one or more of the sets and the supersets of the test data files selected by the operator via the case manager. The artisan would be motivated to provide the case builder for receiving the second set of keywords associated with the sets and the supersets of the test data files as it would enhance the ease of editing the test cases.

HU does not teach that the case builder receives the first set of keywords and the second set of keywords for editing in response to editing actions taken by the operator thereby generating a third set of keywords. **Cowgill (CW)** teaches that the case builder receives the first set of keywords and the second set of keywords for editing in response to editing actions taken by the operator thereby generating a third set of keywords. **CW** says, “The test creation environment is supported by a plurality of modules including a test logic program **editor**, a **test case builder**, a test suite builder and a test scheduler” (Col 12, Lines 34-37). **CW** also says, “The test builder **menu** includes administrative data area for describing **information about the test case**” (Col 14, Lines 40-42). It is understood that the information about the test case includes

the first set of keywords and the second set of keywords. The editing action will generate the third set of keywords.

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the organizing and managing system (scenario manager) of **Huang et al.** with the test case builder of **Cowgill** for receiving the first set of keywords and the second set of keywords for editing in response to editing actions taken by the operator, thereby generating the third set of keywords. The artisan would be motivated to provide the case builder for receiving the first set of keywords and the second set of keywords for editing as it would enhance the ease of editing the test cases.

18. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Huang et al. (HU)** in view of **Cowgill (CW)**.

Claim 3 includes the organizing and managing system of Claim 2, and further specifies:

1. The editing means has a run manager for receiving the third set of keywords from the simulation file and submitting the third set of keywords to the simulator.
2. The simulator uses the third set of keywords from the simulation file during its execution and generates the set of simulation results.

As per Claim 3, **HU** and **CW** teach the invention of Claim 2, as discussed above.

HU does not teach that the editing means has a run manager for receiving the third set of keywords from the simulation file and submitting the third set of keywords to the simulator.

Cowgill (CW) teaches that the editing means has a run manager for receiving the third set of keywords from the simulation file and submitting the third set of keywords to the simulator.

CW says, "The test execution environment (TEE) includes a **test execution controller** and a **test reporter**" (Col 12, Lines 52-53). **CW** says, "The objective of TEE is to **control and monitor**

test suite execution, to **log results** of the execution, to analyze the execution results in **comparison to expected results** and to **generate reports**” (Col 12, Lines 54-58).

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the organizing and managing system (scenario manager) of **Huang et al.** with the **test execution controller** of **Cowgill** for receiving the third set of keywords from the simulation file and submitting the third set of keywords to the simulator. The artisan would be motivated to provide the **test execution controller** of **Cowgill** as it would provide efficient control of the simulation.

HU does not teach that the simulator uses the third set of keywords from the simulation file during its execution and generates the set of simulation results. **Cowgill (CW)** teaches that simulator uses the third set of keywords from the simulation file during its execution and generates the set of simulation results. **CW** says, “The objective of TEE is to **control and monitor** test suite execution, to **log results** of the execution, to analyze the execution results in **comparison to expected results** and to **generate reports**” (Col 12, Lines 54-58). **CW** also says, “The test builder **menu** includes administrative data area for describing **information about the test case**” (Col 14, Lines 40-42). It is understood that the information about the test case includes the third set of keywords.

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the organizing and managing system (scenario manager) of **Huang et al.** with the simulator of **Cowgill** that uses the third set of keywords from the simulation file during its execution and generates the set of simulation results. The artisan would be motivated to provide

the simulator that uses the third set of keywords from the simulation file as it would simplify the simulation file.

19. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Huang et al. (HU)** in view of **Cowgill (CW)**.

Claim 4 includes the organizing and managing system of Claim 3, and further specifies:

1. The display includes a results viewer, the results viewer adapted to display the set of simulation results generated from the simulator.

As per Claim 4, **HU** and **CW** teach the invention of Claim 3, as discussed above.

HU also teaches that the display includes a results viewer, the results viewer adapted to display the set of simulation results generated from the simulator. **HU** says, "Service level and cost profiles for each aggregate measure will be **displayed** as time series graphs (Col 97, Lines 19-21).

20. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Huang et al. (HU)** in view of **Cowgill (CW)**.

Claim 5 includes the organizing and managing system of Claim 4, and further specifies:

1. The display includes a report generator, the report generator adapted to generate a report describing the set of simulation results.

As per Claim 5, **HU** and **CW** teach the invention of Claim 4, as discussed above.

HU does not teach that the display includes a report generator, the report generator adapted to generate a report describing the set of simulation results. **Cowgill (CW)** teaches that

the display includes a report generator, the report generator adapted to generate a report describing the set of simulation results. CW says, “The test execution environment (TEE) includes a **test execution controller** and a **test reporter**” (Col 12, Lines 52-53). CW also says, “The objective of TEE is to **control and monitor** test suite execution, to **log results** of the execution, to analyze the execution results in **comparison to expected results** and to **generate reports**” (Col 12, Lines 54-58).

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the organizing and managing system (scenario manager) of **Huang et al.** with the **test reporter** of **Cowgill** to generate a report describing the set of simulation results. The artisan would be motivated to provide the **test reporter** of **Cowgill** to the managing system of **Huang et al.** as it would document the simulation results.

21. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Huang et al. (HU)** in view of **Cowgill (CW)**.

Claim 6 includes the organizing and managing system of Claim 3, and further specifies:

1. The run manager includes monitoring means for monitoring the third set of keywords received from the simulation file.

As per Claim 6, **HU** and **CW** teach the invention of Claim 3, as discussed above.

HU does not teach that the run manager includes monitoring means for monitoring the third set of keywords received from the simulation file. **Cowgill (CW)** teaches that the run manager includes monitoring means for monitoring the third set of keywords received from the simulation file. CW says, “The test execution environment (TEE) includes a **test execution**

controller and a test reporter” (Col 12, Lines 52-53). **CW** also says, “The objective of TEE is to **control and monitor** test suite execution, to **log results** of the execution, to analyze the execution results in **comparison to expected results** and to **generate reports**” (Col 12, Lines 54-58).

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the organizing and managing system (scenario manager) of **Huang et al.** with the **test execution controller** of **Cowgill** with monitoring means for monitoring the third set of keywords received from the simulation file. The artisan would be motivated to provide the **test execution controller** of **Cowgill** with monitoring means for monitoring the third set of keywords as it would facilitate comparing the inputs with simulation execution results.

22. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Huang et al. (HU)** in view of **Cowgill (CW)**.

Claim 7 includes the organizing and managing system of Claim 6, and further specifies:

1. The organizing and managing system has a results file for receiving the set of simulation results from the simulator and storing the set of simulation results.
2. The run manager receives the third set of keywords from the simulation file and the set of simulation results from the results file.
3. The run manager allows the third set of keywords to be compared by an operator with the set of simulation results.

As per Claim 7, **HU** and **CW** teach the invention of Claim 6, as discussed above.

HU does not teach that the organizing and managing system has a results file for receiving the set of simulation results from the simulator and storing the set of simulation results.

Cowgill (CW) teaches that the organizing and managing system has a results file for receiving

the set of simulation results from the simulator and storing the set of simulation results. **CW** says, “The objective of TEE is to **control and monitor** test suite execution, to **log results** of the execution, to analyze the execution results in **comparison to expected results** and to **generate reports**” (Col 12, Lines 54-58).

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the organizing and managing system (scenario manager) of **Huang et al.** with the results file of **Cowgill** for receiving the set of simulation results from the simulator and storing the set of simulation results. The artisan would be motivated to provide the results file of **Cowgill** storing the set of simulation results as it would save the simulation results for later analysis.

HU does not teach that the run manager receives the third set of keywords from the simulation file and the set of simulation results from the results file. **Cowgill (CW)** teaches that the run manager receives the third set of keywords from the simulation file and the set of simulation results from the results file. **CW** says, “The test execution environment (TEE) includes a **test execution controller** and a **test reporter**” (Col 12, Lines 52-53). **CW** also says, “The objective of TEE is to **control and monitor** test suite execution, to **log results** of the execution, to analyze the execution results in **comparison to expected results** and to **generate reports**” (Col 12, Lines 54-58).

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the organizing and managing system (scenario manager) of **Huang et al.** with the **test execution controller** of **Cowgill** that would receive the third set of keywords from the simulation file and the set of simulation results from the results file so **test execution controller**

could analyze the execution results in **comparison to expected results**. The artisan would be motivated to provide the **test execution controller** of **Cowgill** as it would facilitate comparing the inputs with simulation execution results.

HU does not teach that the run manager allows the third set of keywords to be compared by an operator with the set of simulation results. **Cowgill (CW)** teaches that the run manager allows the third set of keywords to be compared by an operator with the set of simulation results. **CW** says, "The test execution environment (TEE) includes a **test execution controller** and a **test reporter**" (Col 12, Lines 52-53). **CW** also says, "The objective of TEE is to **control and monitor** test suite execution, to **log results** of the execution, to analyze the execution results in **comparison to expected results** and to **generate reports**" (Col 12, Lines 54-58).

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the organizing and managing system (scenario manager) of **Huang et al.** with the **test execution controller** of **Cowgill** that allowed the third set of keywords to be compared by an operator with the set of simulation results. The artisan would be motivated to provide the **test execution controller** of **Cowgill** as it would facilitate comparing the inputs with simulation execution results.

23. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Huang et al. (HU)** in view of **Cowgill (CW)**.

Claim 8 includes the organizing and managing system of Claim 7, and further specifies:

1. The display includes a results viewer connected to the results file to display the set of simulation results received from the results file.

As per Claim 8, **HU** and **CW** teach the invention of Claim 7, as discussed above.

HU teaches a display for displaying graphics and performance charts. **HU** says, "Service level and cost profiles for each aggregate measure will be **displayed** as time series graphs (Col 97, Lines 19-21).

HU does not teach that the display includes a results viewer connected to the results file to display the set of simulation results received from the results file. **Cowgill (CW)** teaches a results viewer connected to the results file to display the set of simulation results. **CW** says, "The objective of TEE is to **control and monitor** test suite execution, to **log results** of the execution, to analyze the execution results in **comparison to expected results** and to **generate reports**" (Col 12, Lines 54-58).

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the organizing and managing system (scenario manager) of **Huang et al.** with results viewer connected to the results file of **Cowgill**. The artisan would be motivated to provide the results viewer connected to the results file of **Cowgill** so it would be possible to display the results for the simulations previously executed.

24. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Huang et al. (HU)** in view of **Cowgill (CW)**.

Claim 9 includes the organizing and managing system of Claim 8, and further specifies:

1. The display includes a report generator connected to the results file, the report generator adapted to generate a report describing the set of simulation results received from the results file.

As per Claim 9, **HU** and **CW** teach the invention of Claim 8, as discussed above.

HU does not teach a report generator connected to the results file, the report generator adapted to generate a report describing the set of simulation results received from the results file. **Cowgill (CW)** teaches a report generator connected to the results file, the report generator adapted to generate a report describing the set of simulation results received from the results file. **CW** says, "The objective of TEE is to **control and monitor** test suite execution, to **log results** of the execution, to analyze the execution results in **comparison to expected results** and to **generate reports**" (Col 12, Lines 54-58).

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the organizing and managing system (scenario manager) of **Huang et al.** with report generator of **Cowgill** that would generate a report describing the set of simulation results received from the results file. The artisan would be motivated to provide the report generator of **Cowgill** as it would facilitate generating test reports for the simulations previously executed.

25. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Huang et al. (HU)** in view of **Cowgill (CW)**.

Claim 11 includes the method of Claim 10, and further specifies:

1. The steps of editing a first set of keywords representing the sets of data and generating a second set of keywords representing edited versions of the sets of data.
2. Submitting the second set of keywords to the simulator in response to the editing step.
3. The simulator generates the set of simulation results in response to the second set of keywords.

As per Claim 11, **HU** teaches the invention of Claim 10, as discussed Paragraph 14 above.

HU does not teach the steps of editing a first set of keywords representing the sets of data and generating a second set of keywords representing edited versions of the sets of data.

Cowgill (CW) teaches the steps of editing a first set of keywords representing the sets of data and generating a second set of keywords representing edited versions of the sets of data. **CW** says, “The test creation environment is supported by a plurality of modules including a test logic program **editor**, a **test case builder**, a test suite builder and a test scheduler” (Col 12, Lines 34-37). **CW** also says, “The test builder **menu** includes administrative data area for describing **information about the test case**” (Col 14, Lines 40-42). It is understood that the information about the test case is same as the first set of keywords and second set of keywords.

It would have been obvious to one of ordinary skill in the art at the time of the invention to enhance the method of **Huang et al.** with the test case builder of **Cowgill** for providing the steps of editing a first set of keywords representing the sets of data and generating a second set of keywords representing edited versions of the sets of data. The artisan would be motivated to provide the case builder for editing the first set of keywords as it would enhance the ease of use of various test cases.

HU does not teach submitting the second set of keywords to the simulator in response to the editing step. **Cowgill (CW)** teaches submitting the second set of keywords to the simulator in response to the editing step. **CW** says, “The test creation environment is supported by a plurality of modules including a test logic program **editor**, a **test case builder**, a test suite builder and a test scheduler” (Col 12, Lines 34-37). **CW** also says, “The test builder **menu** includes administrative data area for describing **information about the test case**” (Col 14, Lines

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40-42). It is understood that the information about the test case includes the keywords that are submitted to the simulator.

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the method of **Huang et al.** with the feature of submitting the second set of keywords to the simulator in response to the editing step as done by **Cowgill**. The artisan would be motivated to provide the feature of submitting the second set of keywords as it would provide edited keywords to the simulator to specify the test case.

HU does not teach that the simulator generates the set of simulation results in response to the second set of keywords. **Cowgill (CW)** teaches that the simulator generates the set of simulation results in response to the second set of keywords. **CW** says, "The objective of TEE is to **control and monitor** test suite execution, to **log results** of the execution, to analyze the execution results in **comparison to expected results** and to **generate reports**" (Col 12, Lines 54-58). **CW** also says, "The test builder **menu** includes administrative data area for describing **information about the test case**" (Col 14, Lines 40-42). It is understood that the information about the test case includes the keywords that are submitted to the simulator.

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the method of **Huang et al.** with the feature of simulator generating the set of simulation results in response to the second set of keywords as done by **Cowgill**. The artisan would be motivated to provide this feature as it would enable the simulation to be changed using the edited set of keywords.

26. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Huang et al. (HU)** in view of **Cowgill (CW)**.

Claim 12 includes the method of Claim 11, and further specifies:

1. The displaying step comprises the step of storing the set of simulation results which are generated from the simulator, in a results file.
2. The displaying step includes displaying the set of simulation results which are stored in the results file.

As per Claim 12, **HU** teaches the invention of Claim 11, as discussed above.

HU does not teach that the displaying step comprises the step of storing the set of simulation results which are generated from the simulator, in a results file. **Cowgill (CW)** teaches that the displaying step comprises the step of storing the set of simulation results which are generated from the simulator, in a results file. **CW** says, “The objective of TEE is to **control and monitor** test suite execution, to **log results** of the execution, to analyze the execution results in **comparison to expected results** and to **generate reports**” (Col 12, Lines 54-58).

It would have been obvious to one of ordinary skill in the art at the time of the invention to enhance the method of **Huang et al.** with the step of **Cowgill** of storing the set of simulation results which are generated from the simulator, in a results file. The artisan would be motivated to provide the step of storing the set of simulation results which are generated from the simulator, in a results file as it would enable comparison of the simulation results from various runs and against the input data.

HU teaches a display for displaying graphics and performance charts. **HU** says, “Service level and cost profiles for each aggregate measure will be **displayed** as time series graphs (Col 97, Lines 19-21).

HU does not teach displaying the set of simulation results which are stored in the results file. **Cowgill (CW)** teaches storing the simulation results in a results file. **CW** says, "The objective of TEE is to **control and monitor** test suite execution, to **log results** of the execution, to analyze the execution results in **comparison to expected results** and to **generate reports**" (Col 12, Lines 54-58).

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the displaying step of **Huang et al.** with the feature of displaying the set of simulation results which are stored in the results file generated by **Cowgill**. The artisan would be motivated to provide the feature of displaying the set of simulation results which are stored in the results file as it would enable visual comparison of past simulations.

27. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Huang et al. (HU)** in view of **Cowgill (CW)**.

Claim 13 includes the method of Claim 12, and further specifies:

1. The step of storing the set of simulation results in a results file includes comparing the second set of keywords submitted to the simulator with the set of simulation results stored in the results file.
2. Storing the set of simulation results, which are generated from the simulator, in a results file.

As per Claim 13, **HU** and **CW** teach the invention of Claim 12, as discussed above.

HU does not teach the step of storing the set of simulation results in a results file includes comparing the second set of keywords submitted to the simulator with the set of simulation results stored in the results file. **Cowgill (CW)** teaches the step of storing the set of simulation

results in a results file includes comparing the second set of keywords submitted to the simulator with the set of simulation results stored in the results file. CW says, “The objective of TEE is to **control and monitor** test suite execution, to **log results** of the execution, to analyze the execution results in **comparison to expected results** and to **generate reports**” (Col 12, Lines 54-58).

It would have been obvious to one of ordinary skill in the art at the time of the invention to enhance the method of **Huang et al.** with the step of **Cowgill** of comparing the second set of keywords submitted to the simulator with the set of simulation results stored in the results file. The artisan would be motivated to provide the step of comparing the second set of keywords submitted to the simulator with the set of simulation results stored in the results file as it would facilitate the analysis of simulation results with the input data.

HU does not teach storing the set of simulation results, which are generated from the simulator, in a results file. **Cowgill (CW)** teaches storing the simulation results in a results file. CW says, “The objective of TEE is to **control and monitor** test suite execution, to **log results** of the execution, to analyze the execution results in **comparison to expected results** and to **generate reports**” (Col 12, Lines 54-58).

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the method of **Huang et al.** with the feature of storing the set of simulation results in the results file as done by **Cowgill**. The artisan would be motivated to provide the feature of storing the simulation results in the results file as it would enable analyzing the simulation results later.

28. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Huang et al. (HU)** in view of **Cowgill (CW)**.

Claim 14 includes the method of Claim 13, and further specifies:

1. The step of displaying the set of simulation results stored in the results file includes displaying the set of simulation results via a results viewer.
2. Generating a report documenting the set of simulation results via a report generator.

As per Claim 14, **HU** and **CW** teach the invention of Claim 13, as discussed above.

HU teaches a display for displaying graphics and performance charts, via results viewer. **HU** says, "Service level and cost profiles for each aggregate measure will be **displayed** as time series graphs (Col 97, Lines 19-21).

HU does not teach storing the results file and displaying the set of simulation results via a results viewer. **Cowgill (CW)** teaches storing the results file. **CW** says, "The objective of TEE is to **control and monitor** test suite execution, to **log results** of the execution, to analyze the execution results in **comparison to expected results** and to **generate reports**" (Col 12, Lines 54-58).

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the displaying step of **Huang et al.** with the feature of displaying the set of simulation results which are stored in the results file generated by **Cowgill**. The artisan would be motivated to provide the feature of displaying via results viewer the set of simulation results which are stored in the results file as it would enable visual comparison of past simulations.

HU does not teach generating a report documenting the set of simulation results via a report generator. **Cowgill (CW)** teaches generating a report documenting the set of simulation results via a report generator. **CW** says, “The objective of TEE is to **control and monitor** test suite execution, to **log results** of the execution, to analyze the execution results in **comparison to expected results** and to **generate reports**” (Col 12, Lines 54-58).

It would have been obvious to one of ordinary skill in the art at the time of the invention to enhance the method of **Huang et al.** with the feature of **Cowgill** for generating a report documenting the set of simulation results via a report generator. The artisan would be motivated to provide the feature of generating a report documenting the set of simulation results via a report generator, as it would save the simulation results for later analysis.

29. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Gunesequera (GU)** in view of **Huang et al. (HU)** and **Cowgill (CW)**.

Claim 15 specifies:

1. A simulation system responsive to a plurality of sets of input data for simulating an earth formation located in the vicinity of an oilfield reservoir.
2. The simulation system generates a set of simulation results in response to the simulation and displays the set of simulation results.
3. The simulation system includes case manager means for organizing and managing the plurality of sets of input data being used by the simulation system.
4. The case manager means includes a plurality of case scenarios organized in a tree-like structure.
5. An operator selecting one or more of the case scenarios in the case manager.
6. The case builder means for receiving the case scenarios selected by the operator, editing a set of data within the selected case scenarios and generating a set of edited case scenarios.
7. The run manager means responding to the set of edited case scenarios from the case builder means for submitting the edited case scenarios to a simulator.
8. The simulator responds to the edited case scenarios from the run manager means by generating the set of simulation results.
9. The set of simulation results from the simulator are stored in a results file.

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10. The results viewer means for displaying the set of simulation results generated by the simulator.
11. The results viewer displays the set of simulation results and any instantaneous changes being made to the set of simulation results at any point in time.
12. The report generator means for generating one or more reports which record the set of simulation results.

GU teaches a simulation system responsive to a plurality of sets of input data for simulating an earth formation located in the vicinity of an oilfield reservoir. GU says, “Flow simulations on grids based on triangles have been used by various authors inside and outside the petroleum industry. This technique was applied to **reservoir simulation** by Forsyth”. GU says, “In response to the (output) input data, the **simulator** will generate **simulation results**” (Col 17, Lines 29-30).

GU teaches that the simulation system generates a set of simulation results in response to the simulation and displays the set of simulation results. GU says, “The assigned color associated with the particular **simulation results** will be used to **display** the actual value of the simulation results on the **3D viewer**” (Col 17, Lines 56-59).

GU teaches the results viewer means for displaying the set of simulation results generated by the simulator. . GU says, “The assigned color associated with the particular **simulation results** will be used to **display** the actual value of the simulation results on the **3D viewer**” (Col 17, Lines 56-59).

GU does not teach that the simulation system includes case manager means for organizing and managing the plurality of sets of input data being used by the simulation system.

HU teaches that the simulation system includes case manager means for organizing and managing the plurality of sets of input data being used by the simulation system. HU says,

“Users generate **changes to the databases** that can be saved as **scenarios** which can be managed by a **scenario manager**” (Col 94, Lines 42-45).

It would have been obvious to one of ordinary skill in the art at the time of the invention to enhance the simulation system of **Gunesekera** with the case manager of **Huang et al.** for organizing and managing the plurality of sets of input data being used by the simulation system. The artisan would be motivated to provide the case manager, as it would facilitate efficient management of simulation data.

GU does not teach that the case manager means includes a plurality of case scenarios organized in a tree-like structure. **HU** teaches that the case manager means includes a plurality of case scenarios organized in a tree-like structure. **HU** says, “Users generate **changes to the databases** that can be saved as **scenarios** which can be managed by a **scenario manager**” (Col 94, Lines 42-45). **HU** shows **tree-like data structure** (Figure 59).

It would have been obvious to one of ordinary skill in the art at the time of the invention to enhance the simulation system of **Gunesekera** with the case manager of **Huang et al.** that includes a plurality of case scenarios organized in a tree-like structure. The artisan would be motivated to provide the case manager with tree-like data structure, as it would facilitate efficient management of simulation data.

GU does not teach an operator selecting one or more of the case scenarios in the case manager. **HU** teaches an operator selecting one or more of the case scenarios in the case manager. **HU** says, “The user should be allowed to load **portion of a scenario** into a frame” (Col 95, Lines 3-4).

It would have been obvious to one of ordinary skill in the art at the time of the invention to enhance the simulation system of **Gunsekera** with the case manager of **Huang et al.** that enables an operator selecting one or more of the case scenarios in the case manager. The artisan would be motivated to provide the case manager that enables an operator selecting one or more of the case scenarios, as it would facilitate ease of use of simulation data.

GU does not teach the case builder means for receiving the case scenarios selected by the operator, editing a set of data within the selected case scenarios and generating a set of edited case scenarios. **CW** teaches the case builder means for receiving the case scenarios selected by the operator, editing a set of data within the selected case scenarios and generating a set of edited case scenarios. **CW** says, "The test creation environment is supported by a plurality of modules including a test logic program **editor**, a **test case builder**, a test suite builder and a test scheduler" (Col 12, Lines 34-37).

It would have been obvious to one of ordinary skill in the art at the time of the invention to enhance the simulation system of **Gunsekera** with the case builder of **Cowgill** for receiving the case scenarios selected by the operator, editing a set of data within the selected case scenarios and generating a set of edited case scenarios. The artisan would be motivated to provide the case builder means for receiving the case scenarios, editing a set of data within the case scenarios and generating a set of edited case scenarios as it would facilitate ease of generation of simulation case data.

GU does not teach the run manager means responding to the set of edited case scenarios from the case builder and means for submitting the edited case scenarios to a simulator. **CW** teaches the run manager means responding to the set of edited case scenarios from the case

builder and means for submitting the edited case scenarios to a simulator. CW says, “The test execution environment (TEE) includes a **test execution controller** and a **test reporter**” (Col 12, Lines 52-53). CW says, “The objective of TEE is to **control and monitor** test suite execution, to **log results** of the execution, to analyze the execution results in **comparison to expected results** and to **generate reports**” (Col 12, Lines 54-58).

It would have been obvious to one of ordinary skill in the art at the time of the invention to enhance the simulation system of **Gunesekera** with the run manager means of **Cowgill** for responding to the set of edited case scenarios from the case builder and for submitting the edited case scenarios to a simulator. The artisan would be motivated to provide the run manager, as it would facilitate ease of control of simulation.

GU does not teach that the simulator responds to the edited case scenarios from the run manager means by generating the set of simulation results. CW teaches that simulator responds to the edited case scenarios from the run manager means by generating the set of simulation results. CW says, “The test execution environment (TEE) includes a **test execution controller** and a **test reporter**” (Col 12, Lines 52-53). CW says, “The objective of TEE is to **control and monitor** test suite execution, to **log results** of the execution, to analyze the execution results in **comparison to expected results** and to **generate reports**” (Col 12, Lines 54-58).

It would have been obvious to one of ordinary skill in the art at the time of the invention to enhance the simulation system of **Gunesekera** with the capability to respond to the edited case scenarios from the run manager of **Cowgill** for generating the set of simulation results. The artisan would be motivated to provide the simulator to accept edited inputs from the run manager, as it would facilitate ease of use of simulation.

GU does not teach that the set of simulation results from the simulator are stored in a results file. CW teaches that the set of simulation results from the simulator are stored in a results file. CW says, "The objective of TEE is to **control and monitor** test suite execution, to **log results** of the execution, to analyze the execution results in **comparison to expected results** and to **generate reports**" (Col 12, Lines 54-58).

It would have been obvious to one of ordinary skill in the art at the time of the invention to enhance the simulation system of **Gunesekera** with the capability of **Cowgill** to store the simulation results from the simulator in a results file. The artisan would be motivated to provide the simulator with the capability to store the simulation results from the simulator in a results file, as it would enable later analysis of simulation results.

GU does not teach that the results viewer displays the set of simulation results and any instantaneous changes being made to the set of simulation results at any point in time. HU teaches that the results viewer displays the set of simulation results and any instantaneous changes being made to the set of simulation results at any point in time. HU says, "The **performance monitoring** screen displays global performance metrics" (Col 96, Lines 57-58).

It would have been obvious to one of ordinary skill in the art at the time of the invention to enhance the simulation system of **Gunesekera** with the capability of **Huang et al** to display the set of simulation results and any instantaneous changes being made to the set of simulation results at any point in time. The artisan would be motivated to provide the simulator with the capability to display the simulation results and any instantaneous changes to the simulation results, as it would enable efficient monitoring of simulation.

GU does not teach the report generator means for generating one or more reports which record the set of simulation results. **CW** teaches the report generator means for generating one or more reports which record the set of simulation results. **CW** says, “The objective of TEE is to **control and monitor** test suite execution, to **log results** of the execution, to analyze the execution results in **comparison to expected results** and to **generate reports**” (Col 12, Lines 54-58).

It would have been obvious to one of ordinary skill in the art at the time of the invention to enhance the simulation system of **Gunesekera** with the report generator means of **CW** for generating one or more reports which record the set of simulation results. The artisan would be motivated to provide the simulator with the report generator means, as it would enable proper documentation of simulation.

30. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Huang et al. (HU)** in view of **Cowgill (CW)**.

Claim 17 includes the device of Claim 16, and further specifies:

1. The device comprises the step of receiving a set of simulation results from the simulator when the edited data is submitted to the simulator.
2. The device comprises the step of storing the set of simulation results in a results file.

As per Claim 17, **HU** teaches the invention of Claim 16, as discussed in Paragraph 15 above.

HU also teaches the device comprises the step of receiving a set of simulation results from the simulator when the edited data is submitted to the simulator. **HU** says, “Scenarios

contain **edited data, results of the analysis**, graphs, charts and performance metrics” (Col 94, Lines 45-46).

HU does not teach the device comprises the step of storing the set of simulation results in a results file. **Cowgill (CW)** teaches the device comprises the step of storing the set of simulation results in a results file. **CW** says, “The objective of TEE is to **control and monitor** test suite execution, to **log results** of the execution, to analyze the execution results in **comparison to expected results** and to **generate reports**” (Col 12, Lines 54-58).

It would have been obvious to one of ordinary skill in the art at the time of the invention to enhance the device of **Huang et al.** with the feature of **Cowgill** for storing the set of simulation results in a results file. The artisan would be motivated to provide the feature of storing the set of simulation results in a results file, as it would enable later analysis of the results.

31. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Huang et al. (HU)** in view of **Cowgill (CW)**.

Claim 18 includes the device of Claim 17, and further specifies:

1. The device comprises the step of monitoring the edited data submitted to the simulator.
2. The device comprises the step of comparing the edited data submitted to the simulator with the set of simulation results generated from the simulator.

As per Claim 18, **HU** and **CW** teach the invention of Claim 17, as discussed above.

HU does not teach that the device comprises the step of monitoring the edited data submitted to the simulator. **Cowgill (CW)** teaches that the device comprises the step of

monitoring the edited data submitted to the simulator. **CW** says, “The objective of TEE is to **control and monitor** test suite execution, to **log results** of the execution, to analyze the execution results in **comparison to expected results** and to **generate reports**” (Col 12, Lines 54-58).

It would have been obvious to one of ordinary skill in the art at the time of the invention to enhance the device of **Huang et al.** with the feature of **Cowgill** for monitoring the edited data submitted to the simulator. The artisan would be motivated to provide the feature of monitoring the edited data submitted to the simulator, as it would enable comparing the execution results with the expected results.

HU does not teach that the device comprises the step of comparing the edited data submitted to the simulator with the set of simulation results generated from the simulator. **Cowgill (CW)** teaches that the device comprises the step of comparing the edited data submitted to the simulator with the set of simulation results generated from the simulator. **CW** says, “The objective of TEE is to **control and monitor** test suite execution, to **log results** of the execution, to analyze the execution results in **comparison to expected results** and to **generate reports**” (Col 12, Lines 54-58).

It would have been obvious to one of ordinary skill in the art at the time of the invention to enhance the device of **Huang et al.** with the feature of **Cowgill** for comparing the edited data submitted to the simulator with the set of simulation results generated. The artisan would be motivated to provide the feature for comparing the edited data with the set of simulation results generated, as it would verify that the system performed as expected.

32. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Huang et al. (HU)** and **Cowgill (CW)**.

Claim 19 includes the device of Claim 18, and further specifies:

1. The device comprises the step of transmitting to a display the set of simulation results stored in the results file approximately simultaneously with the monitoring of the set of simulation results.

As per Claim 19, **HU** and **CW** teach the invention of Claim 18, as discussed above.

HU also teaches that the device comprises the step of transmitting to a display the set of simulation results stored in the results file approximately simultaneously with the monitoring of the set of simulation results. **HU** also says, “**User interface of the performance simulator has three major features: network configuration, parameter settings and simulation and monitoring**” (Col 96, Lines 35-37). **HU** says, “The **performance monitoring** screen displays global performance metrics” (Col 96, Lines 57-58).

Conclusion

33. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kandasamy Thangavelu whose telephone number is 703-305-0043. The examiner can normally be reached on Monday through Friday from 7:00 AM to 4:30 PM.

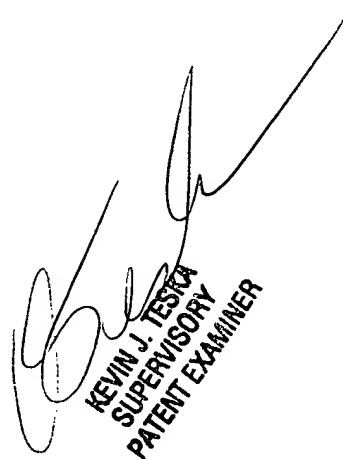
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Teska, can be reached on (703) 305-9704. The fax phone number for the organization where this application or proceeding is assigned is 703-746-7329.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-9600.

K. Thangavelu
Art Unit 2123
December 7, 2001



KEVIN J. TESTA
SUPERVISORY
PATENT EXAMINER